

# Engineering Heritage Australia Bulletin: #10

## 18 October 2021

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### Sydney Opera House

The engineering achievements and technological innovation involved in design and construction of the Sydney Opera House were approved as an Engineering Heritage International Marker in January 2021.

Subsequently, Engineers Australia and the Australia Section of the American Society of Civil Engineers (ASCE) made a joint nomination to the ASCE, for the Opera House to be designated an International Historic Civil Engineering Landmark; this was approved in early September.

### Historical overviews of bridge types in NSW

Amie Nicholas has provided the following link to historical overviews of bridge types in NSW compiled from bridge population studies commissioned by the NSW Roads & Traffic Authority - <https://roads-waterways.transport.nsw.gov.au/documents/about/environment/bridge-types-historical-overviews-2006.pdf>

### Warragamba Dam Raising Project Environmental Impact Statement on public exhibition

The Environmental Impact Statement (EIS) for the proposed Warragamba Dam Raising Project for flood mitigation is on public exhibition from the 29 September 2021, for a period of 45 days **closing on the 12 November 2021**, during which public submissions will be received.

For more information, visit [WaterNSW](https://www.water.nsw.gov.au).

### Learning through Archaeology: Killingworth BILLY - Tuesday 16th November at 2 pm, **GMT**.

This is a public industrial archaeology lecture by Michael R. Bailey and Peter H. Davidson for the Newcomen Society, about determination of the true age of the 19<sup>th</sup> century locomotive, Killingworth BILLY.

BILLY has been in safekeeping as a historic artefact with the City of Newcastle since 1881. Previous to the study it was believed that the locomotive had been built in 1826 at the Robert Stephenson & Co. factory in that city. However, detailed research into its working life

and its several re-buildings, have now shown that it was actually made in 1816 under George Stephenson's supervision, for operation along the Killingworth Colliery line down to the River Tyne. **It has therefore been shown that it is the world's oldest surviving standard-gauge locomotive.**

The archaeological work was undertaken to reveal from which period each component of the locomotive and its equally historic tender had been fitted, and the sequence of these modifications. The talk will be illustrated with both historic views of the locomotive, and photographs and drawings prepared during the course of the project.

For those who don't mind staying up late, the link for bookings is:

<https://www.eventbrite.co.uk/e/134632065131>

Our thanks to Margret Doring for advice of this event.

### ***Contributions needed***

*Readers are invited to share news, bright ideas, issues of concern, advice about online talks – anything that would be of interest and helpful to others, by sending them to Michael at [m.clarke32@optusnet.com.au](mailto:m.clarke32@optusnet.com.au) for inclusion in the next Bulletin - more Australia-wide content would be appreciated.*

Bill Phippen

Acting Chair, Engineering Heritage Sydney